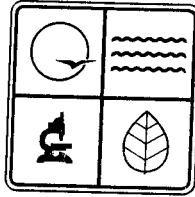


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION



PERMIT BOOK

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **08 2 0 0 6 - 0 0 4** Project Number: **2006-06-059**
Owner: **Lake Ozark Sand & Gravel, Inc.** **PORT-0566**
Owner's Address: **14 Highway V, Eldon, MO 65026**
Installation Name: **Lake Ozark Sand & Gravel – Odie Quarry**
Installation Address: **126 Kinderhook County Road, Brumley, MO 65017**
Location Information: **Camden County, S24, T33N, R14W**

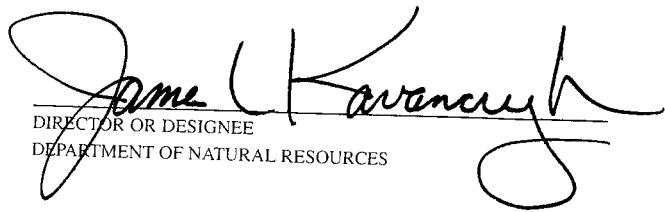
Application for Authority to Construct was made for:

The installation of a new portable rock crushing plant. The portable rock-crushing plant has a maximum hourly design rate (MHDR) of 250 tons per hour (tph). Best Management Practices will be used to control fugitive emissions from haul roads and storage piles at all sites in this permit. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

-
- ☐ Standard Conditions (on reverse) are applicable to this permit.
- ☒ Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

AUG - 8 2006

EFFECTIVE DATE


DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

2006-06-059
PORT-0566

Lake Ozark Sand & Gravel, Inc.

14 Highway V, Eldon, MO 65026

Lake Ozark Sand & Gravel – Odie Quarry

126 Kinderhook County Road, Brumley, MO 65017

Camden County, S24, T33N, R14W

The installation of a new portable rock crushing plant. The portable rock-crushing plant has a maximum hourly design rate (MHDR) of 250 tons per hour (tph). Best Management Practices will be used to control fugitive emissions from haul roads and storage piles at all sites in this permit. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

| | |
|-------------|-------------|
| Page No. | 2 |
| Permit No. | |
| Project No. | 2006-06-059 |

GENERAL SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075); by the Missouri Rules listed in Title 10, Division 10 of the Codes of State Regulations (specifically 10 CSR 10-6.060); by 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority"; by 10 CSR 10-6.010 "Ambient Air Quality Standards" and 10 CSR 10-6.060 subsections (5)(D) and (6)(A); and by control measures requested by the applicant, in their permit application, to reduce the amount of air pollutants being emitted, in accordance with 10 CSR 10-6.060 paragraph (6)(E)3. Furthermore, one or more of the Subparts of 40 CFR Part 60, New Source Performance Standards (NSPS), applies to this installation.

1. **Portable Equipment Identification Requirement**
To assure that each component is properly identified as being a part of this portable rock-crushing plant, (PORT-0566) Lake Ozark Sand & Gravel, Inc. shall provide and maintain suitable, easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component. These identification numbers must be submitted to the Air Pollution Control Program no later than 15 days after start-up of the portable rock-crushing plant.
2. **Relocation of Portable Rock-crushing Plant**
 - A. If this portable rock-crushing plant moves from the initial site reviewed in this permit (Odie Quarry, Site ID: 029-0039, S24, T38N, R14W), then the portable rock-crushing plant shall not be operated at any site location longer than 24 consecutive months without an intervening relocation.
 - B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to any relocation of this portable rock-crushing plant.
 - 1.) If the portable rock-crushing plant is moving to a site previously permitted, and if there are no other new plants at the site, then the application must be received by the Air Pollution Control Program at least seven (7) days prior to the relocation.
 - 2.) If the portable rock-crushing plant is moving to a new site, or if there are other plants or equipment at the site that have not been evaluated for concurrent operation, then the application must be received by the Air Pollution Control Program at least twenty-one (21) days prior to the relocation. The application must include written notification of any concurrently operating plants.
3. **Operating Permit Applicability**
If this portable rock-crushing plant does not move from the initial site (Odie Quarry, Site ID: 029-0039, S24, T38N, R14W) within 24 consecutive months, then Lake Ozark Sand & Gravel, Inc. shall submit an operating permit application. The Air Pollution Control Program must receive this application no later than 30 days after the exceedance of the 24 months
4. **Performance Testing for New Source Performance Standards (NSPS)**
 - A. Lake Ozark Sand & Gravel, Inc. shall submit the enclosed testing plan to the Enforcement section of the Air Pollution Control Program for all equipment applicable to NSPS Subpart "OOO". Lake Ozark Sand & Gravel, Inc. shall contact the Enforcement section to obtain all requirements for testing, and the plan must be submitted to the Enforcement section at least 30 days prior to the proposed test date.
 - B. Testing must be performed no later than 60 days after achieving the maximum production rate of the process, and in any case no later than 180 days after initial startup. The performance test results shall be submitted to the Enforcement section no later than 30 days after completion of any required testing.
5. **Record Keeping Requirement**
The operator(s) shall maintain all records required by this permit for not less than five (5) years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.

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|-------------|-------------|
| Page No. | 3 |
| Permit No. | |
| Project No. | 2006-06-059 |

GENERAL SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

6. Reporting Requirement

The operator(s) shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedances of the limitations imposed by this permit.

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| Page No. | 4 |
| Permit No. | |
| Project No. | 2006-06-059 |

SITE-SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

Site ID No.: 029-0039
 Site Name: Odie Quarry
 Site Address: 126 Kinderhook County Road, Brumley, MO 65017
 Site County: Camden County, S24, T38N, R14W

1. **Best Management Practices**
 Lake Ozark Sand & Gravel shall control fugitive emissions from all of the haul roads and stockpiles at this site by performing *Best Management Practices*, which include the usage of paving, chemical dust suppressants, or documented watering. These practices are defined in Attachment AA.
2. **National Ambient Air Quality Standards (NAAQS) Limitation for Particulate Matter Less Than Ten Microns in Diameter (PM₁₀)**
 - A. During Concurrent Operations with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, the operator(s) for the portable rock-crushing plant (PORT-0566) shall ensure that the ambient impact of PM₁₀ at or beyond the nearest property boundary does not exceed 150 µg/m³ in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).
 - B. The total daily ambient impact of PM₁₀ at this site shall include the combined impact of the portable rock-crushing plant and any ambient background concentration from installations or equipment located on the same site as the portable rock-crushing plant.
 - C. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed. For concurrent operation with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, Inc., use Attachment A-1, *Daily Ambient PM₁₀ Impact Tracking Record*, or other equivalent form(s), for this purpose.
3. **Annual Emission Limit of Particulate Matter Less Than Ten Microns in Diameter (PM₁₀)**
 - A. The operator(s) shall ensure that Lake Ozark Sand & Gravel Inc.'s portable rock-crushing plant emits less than 50 tons of PM₁₀ into the atmosphere in any 12-month period.
 - B. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed and PM₁₀. Attachment A-2, *Monthly PM₁₀ Emissions Tracking Record*, or other equivalent form(s), will be used for this purpose.
4. **Restriction on Process Configuration of Primary Emission Point(s)**
 The maximum hourly design rate of the plant is equal to the sum of the design rate(s) of the primary emission point(s). Lake Ozark Sand & Gravel has designated the following unit(s) as the primary emission point(s) of the portable rock-crushing plant: Primary Crusher. Bypassing the primary emission point(s) for processing is prohibited.
5. **Restriction on the Use of Diesel Engine(s)**
 The diesel engine(s) shall only operate while the plant is running. If the company desires, in the future, to operate the diesel engine(s) while the plant is not running, a new permit review will be required.
6. **Restriction on Minimum Distance to Nearest Property Boundary**
 The primary emission point of the portable rock-crushing plant, which is the primary crusher, shall be located at least 2,000 feet from the nearest property boundary whenever it is operating at this site.

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| Page No. | 5 |
| Permit No. | |
| Project No. | 2006-06-059 |

SITE-SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

Site ID No.: 169-0039
 Site Name: Connor Quarry
 Site Address: 18501 Superior Road, Waynesville, MO 65583
 Site County: Pulaski County, S30, T36N, R11W

1. **Best Management Practices**
 Lake Ozark Sand & Gravel shall control fugitive emissions from all of the haul roads and stockpiles at this site by performing *Best Management Practices*, which include the usage of paving, chemical dust suppressants, or documented watering. These practices are defined in Attachment AA.
2. **National Ambient Air Quality Standards (NAAQS) Limitation for Particulate Matter Less Than Ten Microns in Diameter (PM₁₀)**
 - A. During Concurrent Operations with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, the operator(s) for the portable rock-crushing plant (PORT-0566) shall ensure that the ambient impact of PM₁₀ at or beyond the nearest property boundary does not exceed 150 µg/m³ in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).
 - B. The total daily ambient impact of PM₁₀ at this site shall include the combined impact of the portable rock-crushing plant and any ambient background concentration from installations or equipment located on the same site as the portable rock-crushing plant.
 - C. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed. For concurrent operation with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, Inc., use Attachment B-1, *Daily Ambient PM₁₀ Impact Tracking Record*, or other equivalent form(s), for this purpose.
3. **Moisture Content Testing Requirement for Inherent Moisture Content**
 - A. The inherent moisture content of the rock will reduce particulate emissions. Lake Ozark Sand & Gravel, Inc. claimed the inherent moisture content of the processed rock to be greater than or equal to 1.5 wt%, which shall be verified by testing.
 - B. Testing shall be conducted according to approved methods, such as those prescribed by the *American Society for Testing Materials (ASTM D-2216 or C-566)*, EPA AP-42 Appendix C.2, or other method(s) approved by the Director. The first test shall be no later than 45 days after startup. Testing shall be conducted for three consecutive years during the months of June through September, while the rock-crushing plant is active at this site. If the test results have been consistently greater than 1.5 wt% and there is no reported emission exceedances from the plant, then no further testing is required and this site shall be deemed to have met this condition on all subsequent permits. Verification of the results will be performed during a routine inspection. If the test results have been less than 1.5 wt% and/or there is substantial change in the emissions from the plant, then Lake Ozark Sand & Gravel, Inc. shall apply for a new construction permit to account for the revised information or operate a wet suppression system capable of maintaining visible emissions standards for each unit within 30 days.
 - C. The operator shall obtain test samples before processing (before entering the Primary Crusher) and after processing (prior to load-in to bins and/or storage piles). During the sample processing run only, any spray devices shall be turned off during the processing from which test samples are obtained. The written analytical report shall include the raw data and moisture content (wt.%) of each sample, the test date, and the original signature of the individual performing the test. The report shall be kept with the plant and/or at the company's main corporate office, and be made available to any Department of Natural Resources' personnel upon request.
4. **Restriction on Process Configuration of Primary Emission Point(s)**
 The maximum hourly design rate of the plant is equal to the sum of the design rate(s) of the primary emission point(s). Lake Ozark Sand & Gravel, Inc. has designated the following unit(s) as the primary emission point(s) of the portable rock-crushing plant: Primary Crusher. Bypassing the primary emission point(s) for processing is prohibited.

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| Page No. | 6 |
| Permit No. | |
| Project No. | 2006-06-059 |

SITE-SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

5. Restriction on the Use of Diesel Engine(s)
The diesel engine(s) shall only operate while the plant is running. If the company desires, in the future, to operate the diesel engine(s) while the plant is not running, a new permit review will be required.

6. Restriction on Minimum Distance to Nearest Property Boundary
The primary emission point of the portable rock-crushing plant, which is the primary crusher, shall be located at least 400 feet from the nearest property boundary whenever it is operating at this site.

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| Page No. | 7 |
| Permit No. | |
| Project No. | 2006-06-059 |

SITE-SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

Site ID No.: 131-0024
 Site Name: Vaughn Quarry
 Site Address: 14 Highway V, Bagnell, MO 65583
 Site County: Miller County, S8, T40N, R15W

1. **Best Management Practices**
 Lake Ozark Sand & Gravel shall control fugitive emissions from all of the haul roads and stockpiles at this site by performing *Best Management Practices*, which include the usage of paving, chemical dust suppressants, or documented watering. These practices are defined in Attachment AA.

2. **National Ambient Air Quality Standards (NAAQS) Limitation for Particulate Matter Less Than Ten Microns in Diameter (PM₁₀)**
 - A. During Concurrent Operations with other asphalt, concrete, or rock-crushing plants, the operator(s) for the portable rock-crushing plant (PORT-0566) shall ensure that the ambient impact of PM₁₀ at or beyond the nearest property boundary does not exceed 150 µg/m³ in any 24-hour period, in accordance with the Federal NAAQS requirements (40 CFR 50.6).
 - B. The total daily ambient impact of PM₁₀ at this site shall include the combined impact of the portable rock-crushing plant and any ambient background concentration from installations or equipment located on the same site as the portable rock-crushing plant.
 - C. To demonstrate compliance, the operator(s) shall maintain a daily record of material processed. For concurrent operation with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, Inc., use Attachment C-1, *Daily Ambient PM₁₀ Impact Tracking Record*, or other equivalent form(s), for this purpose. For concurrent operations with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark San & Gravel, Inc. AND other asphalt concrete, or rock-crushing plants owned by other companies, use Attachment C-2, *Daily Ambient PM₁₀ Impact Tracking Record*, or other equivalent form(s), for this purpose.

3. **Moisture Content Testing Requirement for Inherent Moisture Content**
 - A. The inherent moisture content of the rock will reduce particulate emissions. Lake Ozark Sand & Gravel, Inc. claimed the inherent moisture content of the processed rock to be greater than or equal to 1.5 wt%, which shall be verified by testing.
 - B. Testing shall be conducted according to approved methods, such as those prescribed by the *American Society for Testing Materials (ASTM D-2216 or C-566)*, EPA AP-42 Appendix C.2, or other method(s) approved by the Director. The first test shall be no later than 45 days after startup. Testing shall be conducted for three consecutive years during the months of June through September, while the rock-crushing plant is active at this site. If the test results have been consistently greater than 1.5 wt% and there is no reported emission exceedances from the plant, then no further testing is required and this site shall be deemed to have met this condition on all subsequent permits. Verification of the results will be performed during a routine inspection. If the test results have been less than 1.5 wt% and/or there is substantial change in the emissions from the plant, then Lake Ozark Sand & Gravel, Inc. shall apply for a new construction permit to account for the revised information or operate a wet suppression system capable of maintaining visible emissions standards for each unit within 30 days.
 - C. The operator shall obtain test samples before processing (before entering the Primary Crusher) and after processing (prior to load-in to bins and/or storage piles). During the sample processing run only, any spray devices shall be turned off during the processing from which test samples are obtained. The written analytical report shall include the raw data and moisture content (wt.%) of each sample, the test date, and the original signature of the individual performing the test. The report shall be kept with the plant and/or at the company's main corporate office, and shall be made available to any Department of Natural Resources' personnel upon request.

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| Page No. | 8 |
| Permit No. | |
| Project No. | 2006-06-059 |

SITE-SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

4. **Restriction on Process Configuration of Primary Emission Point(s)**
The maximum hourly design rate of the plant is equal to the sum of the design rate(s) of the primary emission point(s). Lake Ozark Sand & Gravel, Inc. has designated the following unit(s) as the primary emission point(s) of the portable rock-crushing plant: Primary Crusher. Bypassing the primary emission point(s) for processing is prohibited.
5. **Restriction on the Use of Diesel Engine(s)**
The diesel engine shall only operate while the plant is running. If the company desires, in the future, to operate the diesel engine while the plant is not running, a new permit review will be required.
6. **Restriction on Minimum Distance to Nearest Property Boundary**
The primary emission point of the portable rock-crushing plant, which is the primary crusher, shall be located at least 575 feet from the nearest property boundary whenever it is operating at this site.

TECHNICAL REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT

PROJECT DESCRIPTION

Rock, composed of non-metallic minerals, is drilled/blasted, loaded into haul trucks, and transported to processing. Rock is processed through feeder(s), crusher(s), screen(s), conveyor(s), and bin(s). Processing equipment is powered with diesel engine(s). The portable plant is permitted to operate at three different quarries: Odie Quarry, Connor Quarry, and Vaughn Quarry. The emission points are listed in the attached spreadsheet summary. This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2]. The installation is permitted to operate in Camden, Miller, and Pulaski Counties, attainment areas for all criteria air pollutants.

EMISSIONS EVALUATION

Criteria air pollutants will be emitted from this operation. The main air pollutant of concern is PM₁₀. The potential emissions were calculated from the maximum hourly design rate (MHDR) of the equipment, appropriate emission factors, control device efficiencies, and the limiting operating hours at MHDR. The sources of the emission factors and control efficiencies are listed in the section "Permit Documents". Based on the conditioned potential emissions, the operation is considered a minor source under 10 CSR 10-6.060 section (6).

At Odie Quarry only, the portable rock-crushing plant has an annual emission limit of less than 50 tons of PM₁₀ in any 12-month period. A composite PM₁₀ emission factor was developed for the portable rock-crushing plant. The composite emission factor is incorporated into the monthly record keeping table, Attachment A-2. If the conditioned potential emissions of PM₁₀ were 50 tons per year or greater, then the owner would be required to submit dispersion modeling results. At Vaughn and Connor Quarries, the unconditioned potentials for PM₁₀ are below 50 tons.

Table 1: Emissions Summary (tons per year)

| Air Pollutant | Regulatory De Minimis Levels | Sites | Existing Potential Emissions | Potential Emissions of the Application | *New Installation Conditioned Potential | Emission Factor (lb/ton) |
|------------------|------------------------------|--------|------------------------------|--|---|--------------------------|
| PM ₁₀ | 15.0 | Odie | 67.50 | 67.50 | <50 | 0.0616 |
| SO _x | 40.0 | Odie | 2.77 | 2.77 | 2.05 | N/A |
| NO _x | 40.0 | Odie | 42.10 | 42.10 | 31.19 | N/A |
| VOC | 40.0 | Odie | 3.44 | 3.44 | 2.55 | N/A |
| CO | 100.0 | Odie | 9.07 | 9.07 | 6.72 | N/A |
| HAPs | 10.0/25.0 | Odie | 0.04 | 0.04 | 0.03 | N/A |
| PM ₁₀ | 15.0 | Connor | 23.04 | 23.04 | 23.04 | N/A |
| SO _x | 40.0 | Connor | 2.77 | 2.77 | 2.77 | N/A |
| NO _x | 40.0 | Connor | 42.10 | 42.10 | 42.10 | N/A |
| CO | 100.0 | Connor | 9.07 | 9.07 | 9.07 | N/A |
| VOC | 40.0 | Connor | 3.44 | 3.44 | 3.44 | N/A |
| HAPs | 10.0/25.0 | Connor | 0.04 | 0.04 | 0.04 | N/A |
| PM ₁₀ | 15.0 | Vaughn | 29.40 | 29.40 | 29.40 | N/A |
| SO _x | 40.0 | Vaughn | 2.77 | 2.77 | 2.77 | N/A |
| NO _x | 40.0 | Vaughn | 42.10 | 42.10 | 42.10 | N/A |
| CO | 100.0 | Vaughn | 9.07 | 9.07 | 9.07 | N/A |
| VOC | 40.0 | Vaughn | 3.44 | 3.44 | 3.44 | N/A |
| HAPs | 10.0/25.0 | Vaughn | 0.04 | 0.04 | 0.04 | N/A |

Note: N/A = Not Applicable

* PM₁₀ conditioned potential at Odie Quarry based on limit in permit conditions. Other pollutants at Odie Quarry proportionately reduced. Conditioned potential of all pollutants at Connor and Vaughn Quarries based on ambient impact analysis..

AMBIENT AIR QUALITY IMPACT ANALYSIS

The ambient impact at this site shall not exceed the National Ambient Air Quality Standard (NAAQS) of 150 µg/m³ of PM₁₀ at or beyond the nearest property boundary in any single 24-hour period. For sources agreeing to use Best Management Practices (BMPs), as defined in Attachment AA, haul roads and stockpiles are not modeled with screening tools. Instead, they are addressed as a background level of 20 µg/m³ of PM₁₀. To ensure

conformity with NAAQS, the remaining process emissions are limited to an impact of less than 130 $\mu\text{g}/\text{m}^3$ of PM_{10} at or beyond the nearest property boundary.

At Odie Quarry

PORT-0566 is permitted to operate under two (2) scenarios. In scenario 1, PORT-0566 is permitted to operate by itself at the site. In scenario 2, PORT-0545 is permitted to operate concurrently with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, Inc.. PORT-0566 and any other plants at the site shall be held to a combined ambient air impact of less than 130 $\mu\text{g}/\text{m}^3$ of PM_{10} at or beyond the nearest property boundary. According to ambient impact analysis, at Odie Quarry, PORT-0566 can operate twenty-four (24) hours per day during solitary operation and still stay below a PM_{10} ambient impact of 130 $\mu\text{g}/\text{m}^3$. Therefore, the company will not be required to track its daily PM_{10} ambient impact under scenario 1. Under scenario 2, the company will be required to track not only its own daily PM_{10} ambient impact, but also that of the other concurrent plants to ensure compliance with the 130 $\mu\text{g}/\text{m}^3$ limit. For compliance tracking purposes, PORT-0566 shall record the identity of all concurrently operating plants. Attachment A-1 can be used to calculate PM_{10} ambient impact during scenario 2. Screening tools were used to evaluate the ambient air impact of the hourly emissions from PORT-0566 at a distance of 2,000 feet to the nearest property boundary. An ambient impact factor for PM_{10} was developed for PORT-0566, and it is included in Attachment A-1. Ambient impact factors for other concurrent plants can be found in their respective permits.

Table 2: Ambient Air Quality Impact Analysis of PM_{10} , 24-Hour Averaging Time

| Operation | Ambient Impact Factor ($\mu\text{g}/\text{m}^3\text{ton}$) | Modeled Impact ($\mu\text{g}/\text{m}^3$) | *Background ($\mu\text{g}/\text{m}^3$) | NAAQS ($\mu\text{g}/\text{m}^3$) | Daily Production Limit (tons) |
|---------------------------|--|---|--|------------------------------------|-------------------------------|
| 1. Solitary | 0.0085 | 51.13 | 20.00 | 150.00 | 6,000 |
| 2. Concurrent, Same Owner | 0.0085 | ** | 20.00 | 150.00 | ** |

* Background PM_{10} level of 20.00 $\mu\text{g}/\text{m}^3$ from haul roads and stockpiles.

** The operator(s) must balance production among concurrently operating plants, with the ambient impact factors for each, such that NAAQS is not exceeded. Other ambient impact factors from other plants owned by Lake Ozark Sand & Gravel, Inc. can be found in their respective permits.

At Connor Quarry

PORT-0566 is permitted to operate under two (2) scenarios. In scenario 1, PORT-0566 is permitted to operate by itself at the site. In scenario 2, PORT-0545 is permitted to operate concurrently with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, Inc.. PORT-0566 and any other plants at the site shall be held to a combined ambient air impact of less than 130 $\mu\text{g}/\text{m}^3$ of PM_{10} at or beyond the nearest property boundary. According to ambient impact analysis of Connor Quarry, PORT-0566 can operate twenty-four (24) hours per day during solitary operation and still stay below a PM_{10} ambient impact of 130 $\mu\text{g}/\text{m}^3$. Therefore, the company will not be required to track its daily PM_{10} ambient impact under scenario 1. Under scenario 2, the company will be required to track not only its own daily PM_{10} ambient impact, but also that of the other concurrent plants to ensure compliance with the 130 $\mu\text{g}/\text{m}^3$ limit. For compliance tracking purposes, PORT-0566 shall record the identity of all concurrently operating plants. Attachment B-1 can be used to calculate PM_{10} ambient impact. Screening tools were used to evaluate the ambient air impact of the hourly emissions from PORT-0566 at a distance of 400 feet to the nearest property boundary. An ambient impact factors for PM_{10} was developed for PORT-0566, and it is included in Attachment B-1. Ambient impact factors for other concurrent plants can be found in their respective permits.

Table 3: Ambient Air Quality Impact Analysis of PM_{10} , 24-Hour Averaging Time

| Operation | Ambient Impact Factor ($\mu\text{g}/\text{m}^3\text{ton}$) | Modeled Impact ($\mu\text{g}/\text{m}^3$) | *Background ($\mu\text{g}/\text{m}^3$) | NAAQS ($\mu\text{g}/\text{m}^3$) | Daily Production Limit (tons) |
|---------------------------|--|---|--|------------------------------------|-------------------------------|
| 1. Solitary | 0.0171 | 102.72 | 20.00 | 150.00 | 6,000 |
| 2. Concurrent, Same Owner | 0.0171 | ** | 20.00 | 150.00 | ** |

* Background PM_{10} level of 20.00 $\mu\text{g}/\text{m}^3$ from haul roads and stockpiles.

** The operator(s) must balance production among concurrently operating plants, with the ambient impact factors for each, such that NAAQS

is not exceeded. Other ambient impact factors from other plants owned by Lake Ozark Sand & Gravel, Inc. can be found in their respective permits.

At Vaughn Quarry

PORT-0566 is permitted to operate under three (3) scenarios. In scenario 1, PORT-0545 is permitted to operate by itself at the site. In scenario 2, PORT-0545 is permitted to operate concurrently with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, Inc.. In scenario 3, PORT-0566 is permitted to operate concurrently with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, Inc. **AND** other asphalt, concrete, or rock-crushing plants owned by other companies.

Under all scenarios, PORT-0566 and any other plants at the site shall be held to a combined ambient air impact of less than $130 \mu\text{g}/\text{m}^3$ of PM_{10} at or beyond the nearest property boundary. According to ambient impact analysis, PORT-0566 can operate twenty-four (24) hours per day during solitary operation and still stay below a PM_{10} ambient impact of $130 \mu\text{g}/\text{m}^3$. Therefore, the company will not be required to track its daily PM_{10} ambient impact under scenario 1. Under scenario 2, the company will be required to track not only its daily PM_{10} ambient impact, but also that of the other concurrent plants to ensure compliance with the $130 \mu\text{g}/\text{m}^3$ limit. Attachment C-1 can be used for this purpose. Screening tools were used to evaluate the ambient air impact of the hourly emissions from PORT-0566 at a distance of 575 feet to the nearest property boundary. An ambient impact factor for PM_{10} was developed for PORT-0566, and it is included in Attachment C-1. Ambient impact factors for other concurrent plants can be found in their respective permits.

In scenario 3, PORT-0566 is permitted to operate concurrently with other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand & Gravel, Inc. **AND** other asphalt, concrete, or rock-crushing plants owned by other companies. The plants owned by the other companies must be limited, in their permits, to a combined ambient impact of $58.12 \mu\text{g}/\text{m}^3$ of PM_{10} at or beyond their nearest property boundary. PORT-0566 and any other asphalt, concrete, or rock-crushing plants owned by Lake Ozark Sand and Gravel shall then be limited to a combined ambient impact of $71.88 \mu\text{g}/\text{m}^3$ of PM_{10} at or beyond their nearest property boundary. Attachment C-2 can be used to track the daily PM_{10} ambient impact of each plant operating at the site. The ambient impact of plants not owned by Lake Ozark Sand & Gravel is given as background. For plants owned by Lake Ozark Sand & Gravel, their ambient impact factor can be found in their respective permits.

Table 3: Ambient Air Quality Impact Analysis of PM_{10} , 24-Hour Averaging Time

| Operation | Ambient Impact Factor ($\mu\text{g}/\text{m}^3/\text{ton}$) | Modeled Impact ($\mu\text{g}/\text{m}^3$) | *Background ($\mu\text{g}/\text{m}^3$) | NAAQS ($\mu\text{g}/\text{m}^3$) | Daily Production Limit (tons) |
|---|---|---|--|------------------------------------|-------------------------------|
| 1. Solitary | 0.0112 | 67.38 | 20.00 | 150.00 | 6,000 |
| 2. Concurrent, Same Owner | 0.0112 | ** | 20.00 | 150.00 | ** |
| 3. Concurrent, Same and Separate Owners | 0.0112 | ** | 78.12 | 150.00 | ** |

* Background PM_{10} level of $20.00 \mu\text{g}/\text{m}^3$ from haul roads and stockpiles and $58.12 \mu\text{g}/\text{m}^3$ from the operation of other asphalt, concrete, or rock-crushing plants owned by other companies.

** The operator(s) must balance production among concurrently operating plants, with the ambient impact factors for each, such that NAAQS is not exceeded. Ambient impact factors from other plants owned by Lake Ozark Sand & Gravel, Inc. can be found in their respective permits.

The conditioned potentials of NO_x at Connor Quarry and Vaughn Quarry are above the de minimis level of 40 tons. Therefore, ambient impact analysis was conducted on NO_x emissions at each site using Screen 3, the EPA interface for screen modeling, at the distance of maximum concentration, 191 feet. The results show that the NO_x emissions will be below the limit set by NAAQS.

Table 5: Ambient Air Quality Impact Analysis of NO_x

| Modeled Impact ($\mu\text{g}/\text{m}^3$) | NAAQS ($\mu\text{g}/\text{m}^3$) | Averaging Time |
|---|------------------------------------|----------------|
| 41.36 | 100.00 | Annual |

APPLICABLE REQUIREMENTS

The owner is subject to compliance with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements.

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- If this portable rock-crushing plant remains at the initial site reviewed in this permit longer than 24 consecutive months, then the owner shall submit an Operating Permit Application. The Air Pollution Control Program must receive this application no later than 30 days after the exceedance of 24 months.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- 40 CFR Part 60 Subpart "OOO", *Standards of Performance for Nonmetallic Mineral Processing Plants*, of the New Source Performance Standards (NSPS)
- The National Emission Standards for Hazardous Air Pollutants (NESHAPs) and the currently promulgated Maximum Achievable Control Technology (MACT) regulations do not apply to the proposed equipment.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, designating Lake Ozark Sand & Gravel, Inc. as the owner and operator of the installation.
- Environmental Protection Agency (EPA) AP-42, *Compilation of Air Pollutant Emission Factors; Volume I, Stationary Point and Area Sources, Fifth Edition*.
- Noyes Data Corp. book, Orlemann, et al. 1983, *Fugitive Dust Control*.
- EPA Factor Information Retrieval (FIRE) Version 6.21.
- Spreadsheet calculations of potential-to-emit and ambient impact.
- Southwest Regional Office Site Survey.
- Best Management Practices.

Attachment A-1: Daily Ambient PM₁₀ Impact Tracking Record
Lake Ozark Sand & Gravel, PORT-0566 – Portable Rock-crushing Plant
For Concurrent Operations with Other Asphalt, Concrete, or Rock-Crushing Plants Owned by Lake Ozark Sand & Gravel, Inc.

Project Number: 2006-06-059
 Site: Odie Quarry
 Site ID: 029-0039
 County, CSTR: Camden County (S24, T38N, R14W)
 Primary Unit Size: 250 tph
 Distance to Nearest Property Boundary: 2,000 feet

This sheet covers the period from _____ to _____ (Month, Day, Year) (Copy this sheet as needed.)

| Date | Lake Ozark Sand & Gravel PORT-0566 Project # 2006-06-059 | | | Plant Name: Plant ID: Permit #: | | | Plant Name: Plant ID: Permit #: | | | Plant Name: Plant ID: Permit #: | | | ³ Back-ground PM ₁₀ Level (µg/m ³) | ⁴ TOTAL PM ₁₀ Level (µg/m ³) |
|------|--|---|---|---------------------------------------|--|---|---------------------------------------|--|---|---------------------------------------|--|---|--|--|
| | Daily Production (tons) | Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | Daily Production (tons) | ² Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | Daily Production (tons) | ² Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | Daily Production (tons) | ² Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | | |
| | | 0.0085 | | | See Permit | | | See Permit | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
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| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |
| | | 0.0085 | | | | | | | | | | | 20.00 | |

Note 1: The Daily PM₁₀ Impact (µg/m³) for each plant is calculated by multiplying the Daily Production (tons) by the matching Ambient Impact Factor.
 Note 2: The Ambient Impact Factors from other concurrently operating plants can be found in their respective permits.
 Note 3: Background PM₁₀ Level (µg/m³) is from Haul Roads and Stockpiles.
 Note 4: The TOTAL PM₁₀ Level (µg/m³) is calculated by summing the Daily PM₁₀ Ambient Impact(s) and the Background PM₁₀ Level. A TOTAL PM₁₀ Level of less than 150 µg/m³ in any 24-hour period indicates compliance.

Attachment A-2: Monthly PM₁₀ Emissions Tracking Record
Lake Ozark Sand & Gravel, PORT-0566 – Portable Rock-crushing Plant

Project Number: 2006-06-059
Site: Odie Quarry
Site ID: 029-0039
County, CSTR: Camden County (S24, T38N, R14W)
Primary Unit Size: 250 tph
Distance to Nearest Property Boundary: 2,000 feet

This sheet covers the period from _____ to _____ (Month, Day, Year)
(Copy this sheet as needed.)

[illegible]

Note 1: The Monthly Emissions (lbs) are calculated by multiplying the Monthly Production (tons) by the Composite Emission Factor (lbs/ton).

Note 2: The Monthly Emissions (tons) are calculated by dividing the Monthly Emissions (lbs) by 2,000.

Note 3: The 12-Month Emissions (tons/year) are a rolling total calculated by adding the Month's Emissions (tons) to the Monthly Emissions (tons) of the previous eleven (11) months. A total of less than **50** tons in any consecutive 12-month period indicates compliance.

Attachment B-1: Daily Ambient PM₁₀ Impact Tracking Record
Lake Ozark Sand & Gravel, PORT-0566 – Portable Rock-crushing Plant
For Concurrent Operations with Other Asphalt, Concrete, or Rock-Crushing Plants Owned by Lake Ozark Sand & Gravel, Inc.

Project Number: 2006-06-059
 Site: Connor Quarry
 Site ID: 169-0039
 County, CSTR: Pulaski County (S30, T36N, R11W)
 Primary Unit Size: 250 tph
 Distance to Nearest Property Boundary: 400 feet

This sheet covers the period from _____ to _____ (Month, Day, Year) (Copy this sheet as needed.)

| Date | Lake Ozark Sand & Gravel PORT-0566 Project # 2006-06-059 | | | Plant Name: Plant ID: Permit #: | | | Plant Name: Plant ID: Permit #: | | | Plant Name: Plant ID: Permit #: | | | ³ Back-ground PM ₁₀ Level (µg/m ³) | ⁴ TOTAL PM ₁₀ Level (µg/m ³) |
|------|--|---|---|---------------------------------------|--|---|---------------------------------------|--|---|---------------------------------------|--|---|--|--|
| | Daily Production (tons) | Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | Daily Production (tons) | ² Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | Daily Production (tons) | ² Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | Daily Production (tons) | ² Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | | |
| | | 0.0171 | | | See Permit | | | See Permit | | | | | 20.00 | |
| | | 0.0171 | | | | | | | | | | | 20.00 | |
| | | 0.0171 | | | | | | | | | | | 20.00 | |
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| | | 0.0171 | | | | | | | | | | | 20.00 | |
| | | 0.0171 | | | | | | | | | | | 20.00 | |

Note 1: The Daily PM₁₀ Impact (µg/m³) for each plant is calculated by multiplying the Daily Production (tons) by the matching Ambient Impact Factor.
 Note 2: The Ambient Impact Factors from other concurrently operating plants can be found in their respective permits.
 Note 3: Background PM₁₀ Level (µg/m³) is from Haul Roads and Stockpiles.
 Note 4: The TOTAL PM₁₀ Level (µg/m³) is calculated by summing the Daily PM₁₀ Ambient Impact(s) and the Background PM₁₀ Level. A TOTAL PM₁₀ Level of less than 150 µg/m³ in any 24-hour period indicates compliance.

**Attachment C-1: Daily Ambient PM₁₀ Impact Tracking Record
Lake Ozark Sand & Gravel, PORT-0566 – Portable Rock-crushing Plant**

Project Number: 2006-06-059
Site: Vaughn Quarry
Site ID: 131-0024
County, CSTR: Miller County (S8, T40N, R15W)
Primary Unit Size: 250 tph
Distance to Nearest Property Boundary: 575 feet

This sheet covers the period from _____ to _____ (Month, Day, Year) (Copy this sheet as needed.)

[illegible]

Note 1: The Daily PM₁₀ Impact (µg/m³) for each plant is calculated by multiplying the Daily Production (tons) by the matching Ambient Impact Factor.

Note 2: The Ambient Impact Factors from other concurrently operating plants can be found in their respective permits.

Note 3: Background PM₁₀ Level (µg/m³) is from Haul Roads and Stockpiles.

Note 3: The TOTAL PM₁₀ Level (µg/m³) is calculated by summing the Daily PM₁₀ Ambient Impact(s) and the Background PM₁₀ Level. A TOTAL PM₁₀ Level of less than 150 µg/m³ in any 24-hour period indicates compliance.

Attachment C-2: Daily Ambient PM₁₀ Impact Tracking Record
Lake Ozark Sand & Gravel, PORT-0566 – Portable Rock-crushing Plant
Concurrent Operations with Other Asphalt, Concrete, or Rock-Crushing Plants

Project Number: 2006-06-059
 Site: Vaughn Quarry
 Site ID: 131-0024
 County, CSTR: Miller County (S8, T40N, R15W)
 Primary Unit Size: 250 tph
 Distance to Nearest Property Boundary: 575 feet

This sheet covers the period from _____ to _____ (Month, Day, Year) *(Copy this sheet as needed.)*

| Date | Lake Ozark Sand & Gravel PORT-0566 Project # 2006-06-059 | | | Plant Name: Plant ID: Permit #: | | | Plant Name: Plant ID: Permit #: | | | Plant Name: Plant ID: Permit #: | | | ³ Back-ground PM ₁₀ Level (µg/m ³) | ⁴ TOTAL PM ₁₀ Level (µg/m ³) |
|------|--|---|---|---------------------------------------|--|---|---------------------------------------|--|---|---------------------------------------|--|---|--|--|
| | Daily Production (tons) | Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | Daily Production (tons) | ² Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | Daily Production (tons) | ² Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | Daily Production (tons) | ² Ambient Impact Factor (µg/m ³ /ton) | ¹ Daily PM ₁₀ Impact (µg/m ³) | | |
| | | 0.0112 | | | See Permit | | | See Permit | | | | | 78.12 | |
| | | 0.0112 | | | | | | | | | | | 78.12 | |
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Note 1: The Daily PM₁₀ Impact (µg/m³) for each plant is calculated by multiplying the Daily Production (tons) by the matching Ambient Impact Factor.

Note 2: The Ambient Impact Factors from other concurrently operating plants can be found in their respective permits.

Note 3: Background PM₁₀ Level (µg/m³) is from Haul Roads and Stockpiles.

Note 3: The TOTAL PM₁₀ Level (µg/m³) is calculated by summing the Daily PM₁₀ Ambient Impact(s) and the Background PM₁₀ Level. A TOTAL PM₁₀ Level of less than 150 µg/m³ in any 24-hour period indicates compliance.

Attachment AA: Best Management Practices (BMPs)- Construction Industry Fugitive Emissions

Construction Industry Sites covered by the Interim Relief Policy shall maintain Best Management Control Practices (BMPs) for fugitive emission areas at their installations when in operation. Options for BMPs are at least one of the following:

For Haul Roads:

1. Pavement of Road Surfaces –
 - A. The operator(s) may pave all or any portion of the haul roads with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve “Control of Fugitive Emissions¹” while the plant is operating.
 - B. Maintenance and/or repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the haul road(s) as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
2. Usage of Chemical Dust Suppressants –
 - A. The operator(s) shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to all the unpaved portions of the haul roads. The suppressant will be applied in accordance with the manufacturer’s suggested application rate (if available) and re-applied as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
 - B. The quantities of the chemical dust suppressant shall be applied, re-applied and/or maintained sufficient to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator(s) shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.
3. Usage of Documented Watering –
 - A. The operator(s) shall control the fugitive emissions from all the unpaved portions of the haul roads at the installation by consistently and correctly using the application of a water spray. Documented watering will be applied in accordance with a recommended application rate of 100 gallons per day per 1,000 square feet of unpaved/untreated surface area of haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating. For example, the operator(s) shall calculate the total square feet of unpaved vehicle activity area requiring control on any particular day, divide that product by 1,000, and multiply the quotient by 100 gallons for that day.
 - B. The operator(s) shall maintain a log that documents daily water applications. This log shall include, but is not limited to, date and volumes (e.g., number of tanker applications and/or total gallons used) of water application. The log shall also record rationale for not applying water on day(s) the plant is in operation (e.g., meteorological situations, precipitation events, freezing, etc.)
 - C. Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow, and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the plant is operating.
 - D. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads. The operator(s) shall record a brief description of such events in the same log as the documented watering.
 - E. The operator(s) shall record the date and the amount of water applied for each application on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

¹ For purposes of this document, Control of Fugitive Emissions means to control particulate matter that is not collected by a capture system and visible emissions to the extent necessary to prevent violations of the air pollution law or regulation. (Note: control of visible emission is not the only factor to consider in protection of ambient air quality.)

For Vehicle Activity Areas around Open Storage Piles:

1. Pavement of Stockpile Vehicle Activity Surfaces –
 - A. The operator(s) may pave all or any portion of the vehicle activity areas around the storage piles with materials such as asphalt, concrete, and/or other material(s) after receiving approval from the program. The pavement will be applied in accordance with industry standards for such pavement so as to achieve control of fugitive emissions while the plant is operating.
 - B. Maintenance and/or repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator(s) shall periodically water, wash and/or otherwise clean all of the paved portions of the vehicle activity areas around the storage piles as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
2. Usage of Chemical Dust Suppressants –
 - A. The operator(s) shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to all the vehicle activity areas around the open storage piles. The suppressant will be applied in accordance with the manufacturer's suggested application rate (if available) and re-applied as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
 - B. The quantities of the chemical dust suppressant shall be applied, re-applied and/or maintained sufficient to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator(s) shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.
3. Usage of Documented Watering –
 - A. The operator(s) shall control the fugitive emissions from all the vehicle activity areas around the storage piles at the installation by consistently and correctly using the application of a water spray. Documented watering will be applied in accordance with a recommended application rate of 100 gallons per day per 1,000 square feet of unpaved/untreated surface area of vehicle activity areas around the storage piles as necessary to achieve control of fugitive emissions from these areas while the plant is operating. (Refer to example for documented watering of haul roads.)
 - B. The operator(s) shall maintain a log that documents daily water applications. This log shall include, but is not limited to, date and volumes (e.g., number of tanker applications and/or total gallons used) of water application. The log shall also record rationale for not applying water on day(s) the plant is in operations (e.g., meteorological situations, precipitation events, freezing, etc.)
 - C. Meteorological precipitation of any kind, (e.g. a quarter inch or more rainfall, sleet, snow, and/or freeze thaw conditions) which is sufficient in the amount or condition to achieve control of fugitive emissions from these areas while the plant is operating.
 - D. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads. The operator(s) shall record a brief description of such events in the same log as the documented watering.
 - E. The operator(s) shall record the date and the amount of water applied for each application on the above areas. The operator(s) shall keep these records with the plant for not less than five (5) years, and the operator(s) shall make these records available to Department of Natural Resources personnel upon request.

Mr. Brad Napier
Manager
Lake Ozark Sand & Gravel, Inc.
14 Highway V
Eldon, MO 65026

RE: New Source Review Permit - Project Number: 2006-06-059

Dear Mr. Napier:

Enclosed with this letter is your New Source Review permit. Please review your permit carefully and note the special conditions, if any, and the requirements in your permit.

Operation in accordance with the conditions and requirements in your permit and the New Source Review application submitted for project 2006-06-059. The section of the permit entitled "Technical Review of Application for Authority to Construct" should not be separated from the main portion of your permit. The entire permit must be retained in your files. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact me at (573) 751-4817, or you may write to the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, Missouri 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall Hale, P.E.
New Source Review Unit Chief

KH: cwyk

Enclosures

c: Southwest Regional Office
PAMS File: 2006-06-059
Permit Number: